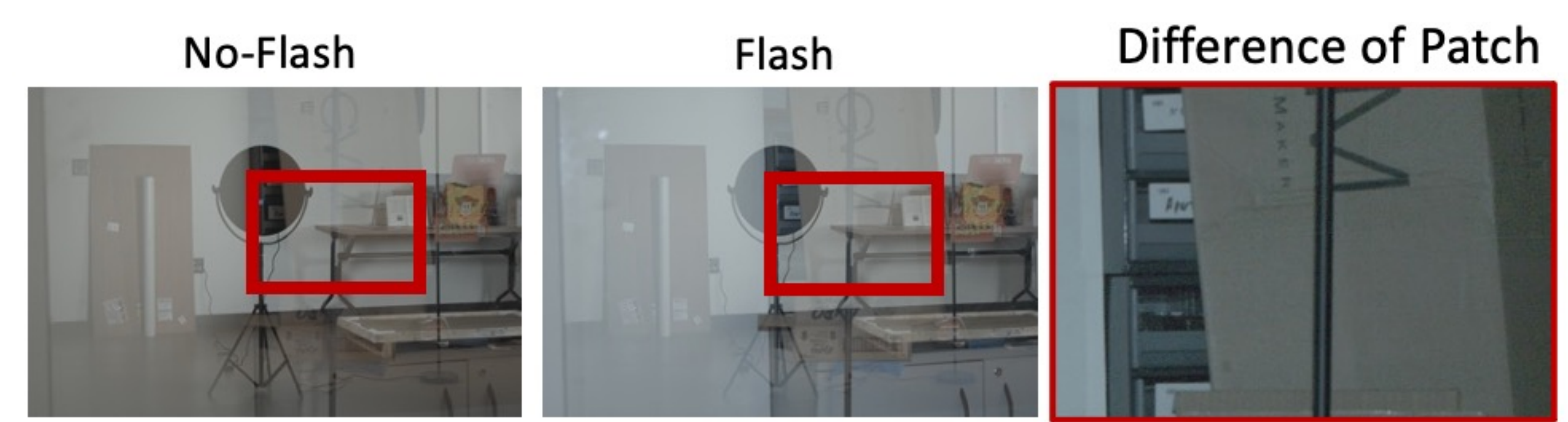


## Motivation

- Reflection separation is a highly under-determined problem.
- Traditional approaches capture paired flash and no-flash images: Their difference will be a reflection-free image.
- Such pairs must be strictly aligned. Even tiny vibrations like pressing the shutter button produce artifacts, even when using tripod.
- Our approach performs 3D reflection separation *without paired* flash/no-flash measurements.



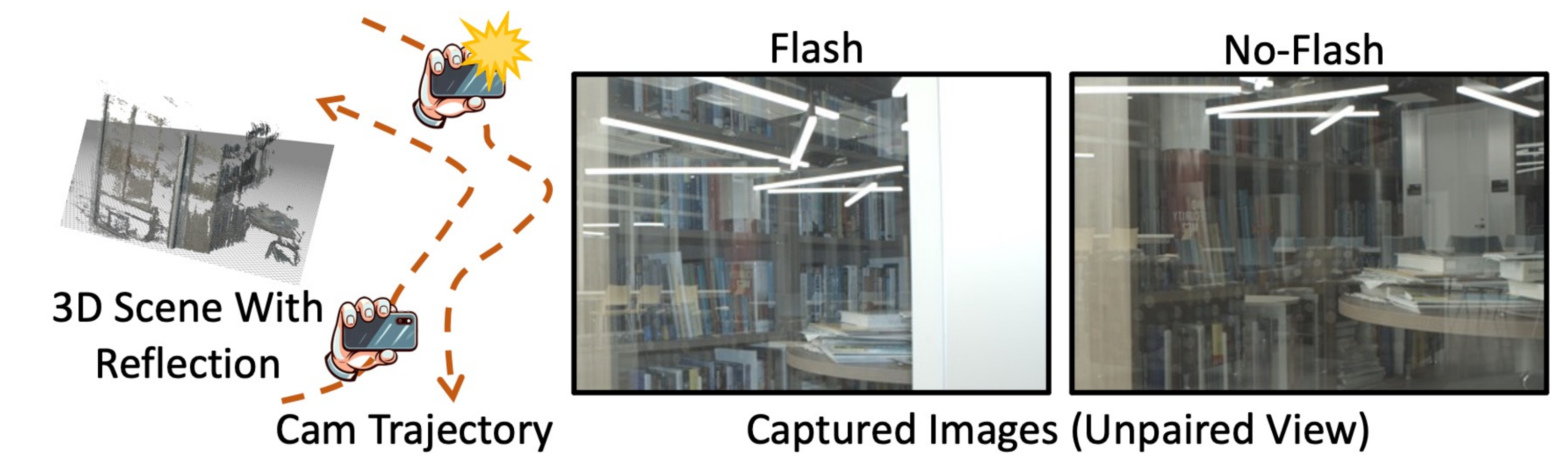
Paired capture with tripod. Wireless shutter control.



Paired capture with tripod. Shutter control pressed by finger.

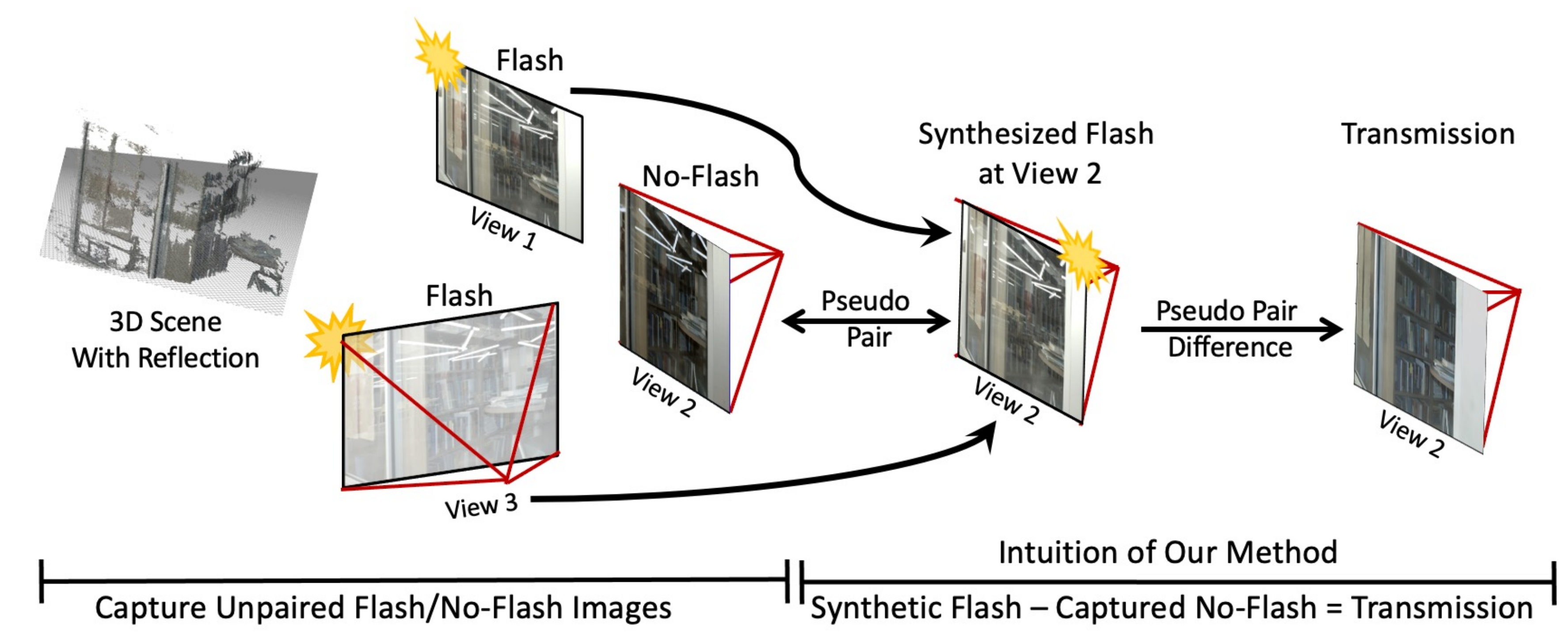
## Proposed Capture Mode

We first capture a set of multi-view images with the flash on, and then capture another set with the flash off. No paired capture is required.

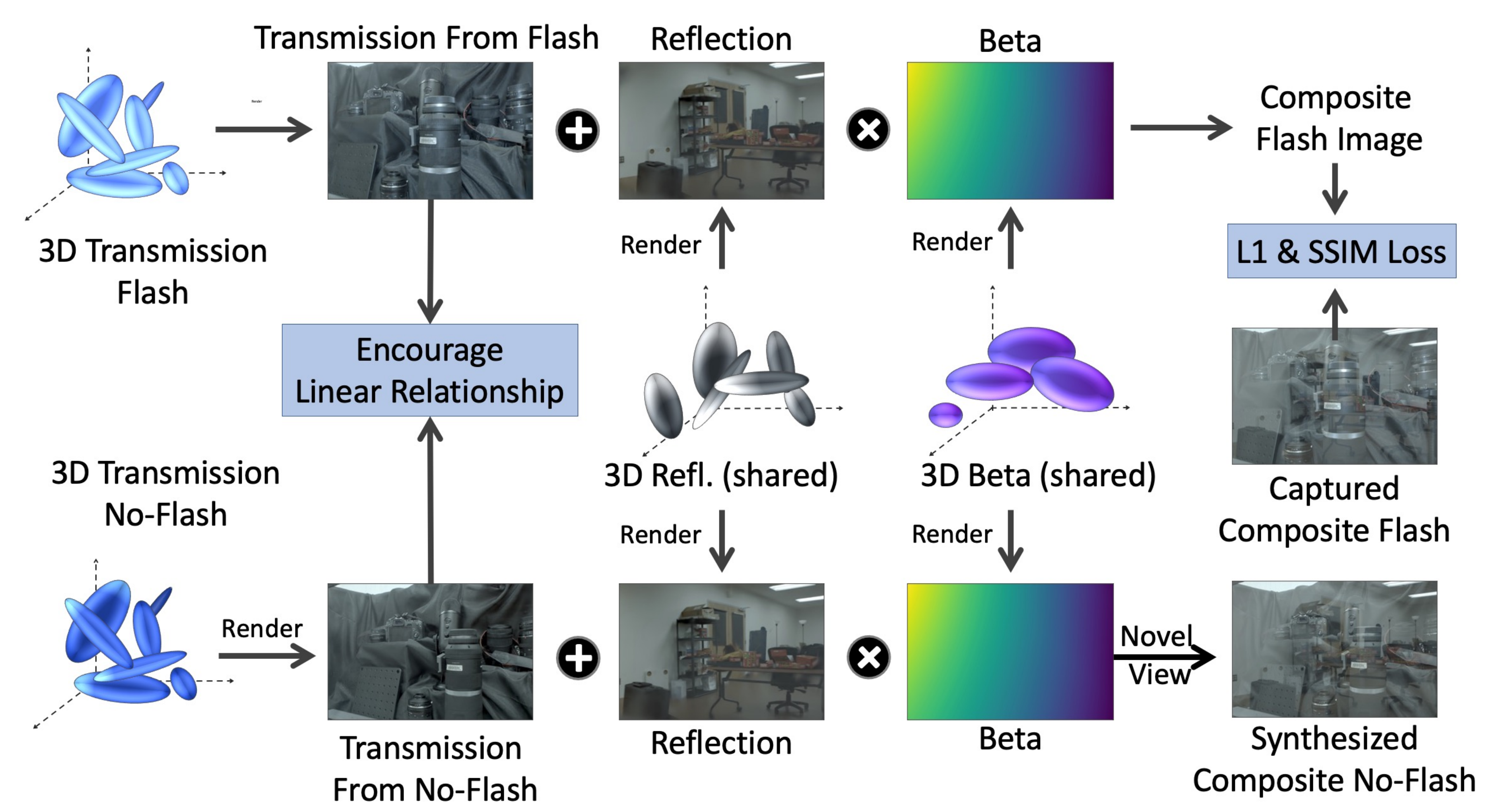


## Key Idea

We can use novel view synthesis to create a 'pseudo-pair' of flash/no-flash images – their difference will be a strong cue for separating out the transmissive light.

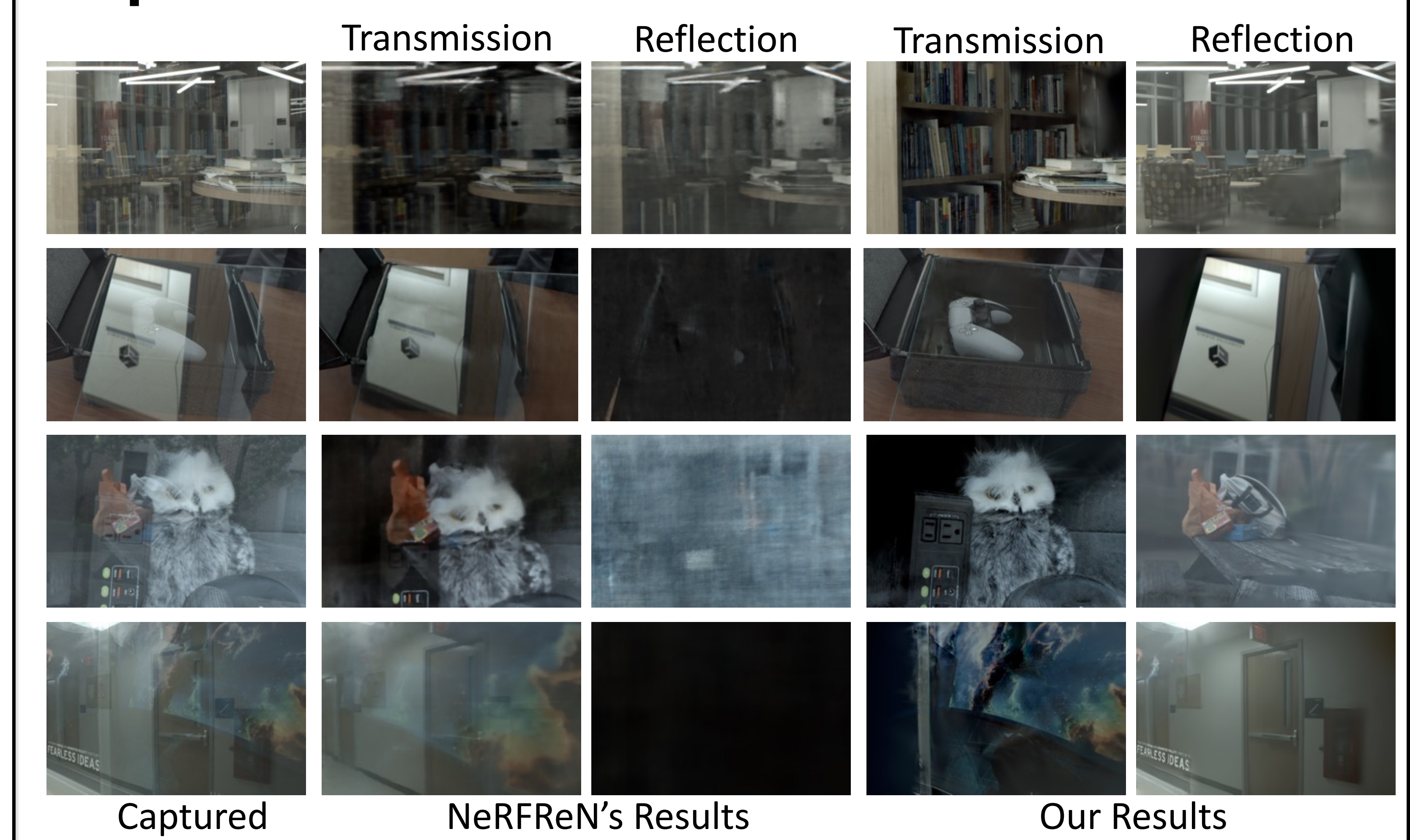


## Proposed Method

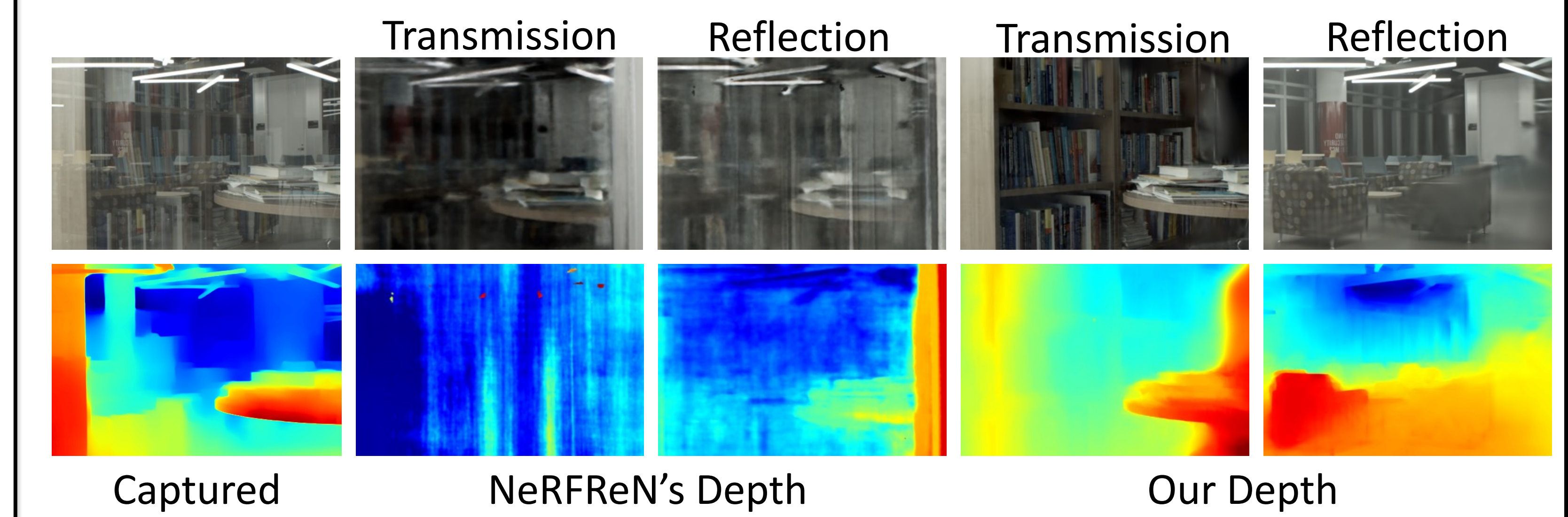


## Experiments

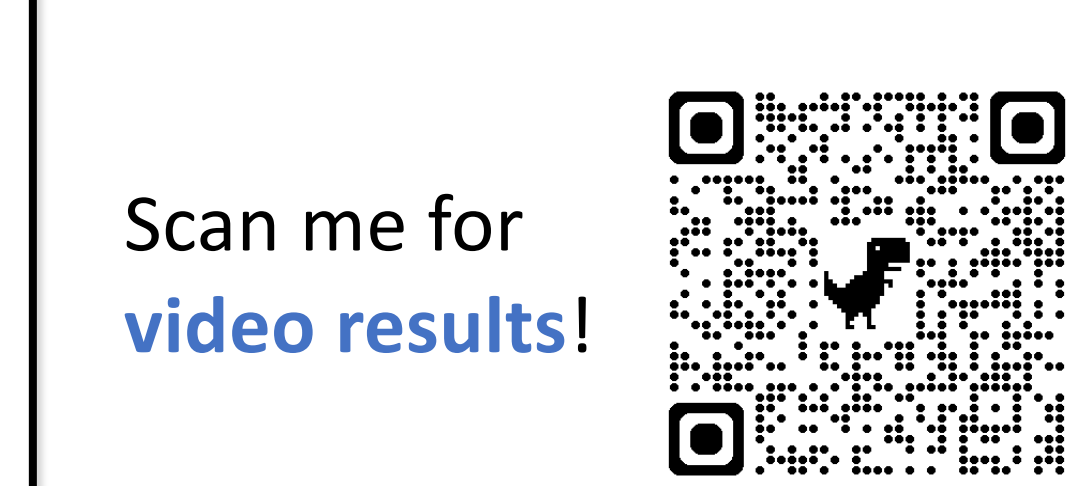
Scan the bottom QR code for [video results](#).



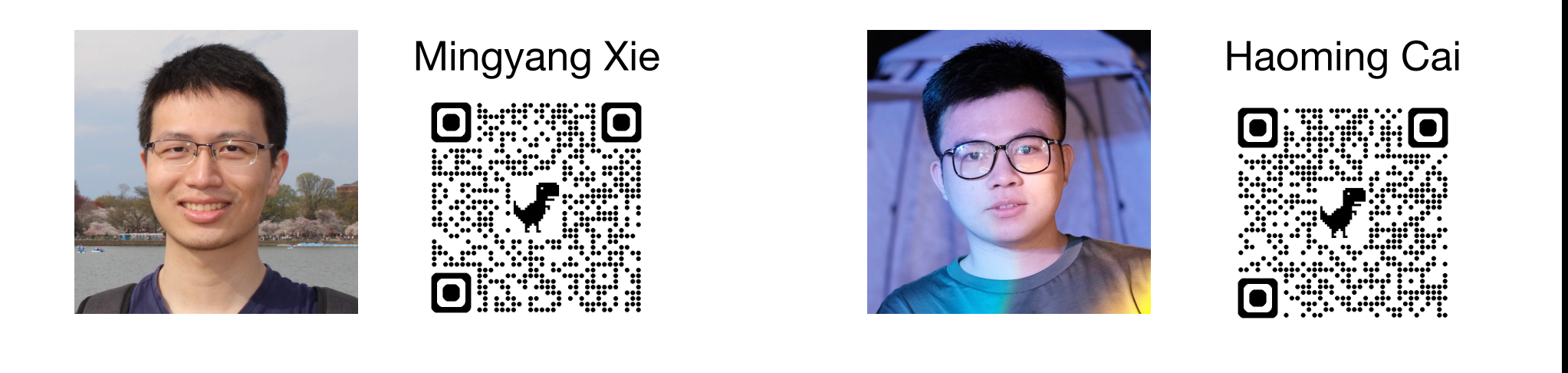
## Depth Estimation



## Project Page



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